

REMARKS

The following submission is submitted in conjunction with a Request for Continued Examination (RCE), and are submitted in response to the Official Action dated January 5, 2011, and the Advisory Action dated July 21, 2011. The period for response has been extended from August 29, 2011 (two months from the filing of a Notice of Appeal) until December 29, 2011.

Claims 1-4, 9-13 and 16 have been amended to more particularly point out and distinctly claim the subject matter of the invention. No new matter has been added. Claims 1-16 are respectfully submitted for consideration.

In the Official Action of January 5, 2011, the following prior art rejections were made:

Claims 1, 4, 10, 11, 13, 15, and 16 were rejected under 35 USC § 103(a) as being unpatentable over Thompson (U.S. Patent Publication No. 2002/0073086) in view of Korus (U.S. Patent No. 7,075,929) and Ginzboorg (U.S. Patent Publication No. 2002/0169712);

Claims 2 and 14 were rejected under 35 USC § 103(a) as being unpatentable over Thompson in view of Korus and Ginzboorg, and further in view of Kahn (U.S. Patent Publication No. 2002/0143951);

Claims 3, 5 and 9 were rejected under 35 USC § 103(a) as being unpatentable over Thompson, Korus, and Ginzboorg, and further in view of Okanoue (U.S. Patent No. 6,243,758);

Claim 6 was rejected under 35 USC § 103(a) as being unpatentable over Thompson, Korus, and Ginzboorg, and further in view of Kumar (U.S. Patent No. 6,269,080);

Claims 7 and 8 were rejected under 35 USC § 103(a) as being unpatentable over Thompson, Korus, and Ginzboorg, and further in view of Gunter (U.S. Patent No. 7,055,027); and

Claim 12 was rejected under 35 USC § 103(a) as being unpatentable over Thompson, Korus, and Ginzboorg, and further in view of Dean (U.S. Patent Publication No. 2003/0061333).

In making these rejections, the Office Action seems to be taking the position that Thompson discloses all of the elements of the claimed invention, with the exception of multicast controllers at cell level, and wherein the multicast connection to a recipient is unidirectional. Korus, Ginzboorg, and other references are cited as curing the deficiencies in Thompson. As will be discussed below, applicants respectfully submit that each of claims 1-16 recite subject matter which is neither disclosed nor suggested in the cited prior art. Furthermore, applicants respectfully submit that the combination of

Thompson, Korus, Ginzboorg, and the other references is an improper attempt to reconstruct the invention based upon hindsight, wherein the applicants own specification provides the basis for such hindsight combination.

Independent claim 1, upon which claims 2-12 depend, is directed to a method including transmitting multicast data packets in at least one first multicast tree from one transmitter through a plurality of multicast controllers to a plurality of recipients. The multicast communication from a multicast controller to a recipient is unidirectional. The method also includes generating at least one second multicast tree for control messages in an internet protocol network beginning from a network multicast controller and ending to at least one multicast controller at cell level. The method further includes transmitting the control messages from the network multicast controller along the at least one second multicast tree to the at least one multicast controller at cell level. The control messages include information on the multicast transmission of the internet protocol network and a command configured to connect to the at least one first multicast tree of the internet protocol network configured for multicasts.

Independent claim 13, upon which claims 14-15 depend, is directed to an arrangement for implementing multicasting in internet protocol networks, including a plurality of routers configured to transmit different components in the internet protocol networks to each other. The arrangement also includes at least one first multicast tree configured to transmit multicast packets through a plurality of multicast controllers to a plurality of recipients. The multicast communication from a multicast controller to a

recipient is unidirectional. The arrangement further includes a plurality of cell-level multicast controllers configured to transmit packets to the plurality of receivers. The arrangement additionally includes a network multicast controller that is arranged to control the cell-level multicast controllers. An internet protocol network includes at least one second multicast tree configured to route control messages beginning from the network multicast controller and ending to the plurality of cell-level multicast controllers. The network multicast controller is configured to transmit the control messages along the at least one second multicast tree to the plurality of cell-level multicast controllers. The control messages include information on the multicast transmission of the internet protocol network and a command configured to connect to the at least one first multicast tree of the internet protocol network configured for multicast transmissions.

Independent claim 16 is directed to an arrangement including first transmission means for transmitting different components in internet protocol networks to each other. The arrangement also includes second transmission means for transmitting multicast packets through a plurality of multicast controllers to a plurality of recipients. The multicast communication from the multicast controllers to the recipients is unidirectional. The arrangement further includes third transmission means for transmitting packets to the plurality of receivers. The multicast connection from a multicast controller to a recipient is unidirectional. The arrangement additionally includes control means for controlling the cell-level multicast controllers. An internet protocol network includes fourth transmission means for routing control messages transmitted from the control means to

the third transmission means. The control means is for transmitting the control messages along the fourth transmission means to the second transmission means. The control messages include information on the multicast transmission of the internet protocol network and a command configured to connect to the second transmission means of the internet protocol network configured for multicast transmissions.

Applicants respectfully submit that the combination of Thompson, Korus, and Ginzboorg fails to disclose or suggest all of the features of any of the presently pending claims.

Thompson, Korus and Ginzboorg are discussed at length in applicants' previous responses including the response filed on June 29, 2011. As explained therein, there is no disclosure nor suggestion in Thompson of configuration including first and second multicast trees, wherein a multicast communication from a multicast controller to a recipient is unidirectional. Quite to the contrary, Thompson requires a reverse-path transmission to end devices. Claims 1-16 make it quite clear that the at least one second multicast tree for control messages in an internet protocol network begins from a network multicast controller and ends to one or more multicast controllers at cell-level. There is simply no disclosure nor suggestion of any such configuration in Thompson.

Also as discussed in applicants' previous correspondence, Korus requires reverse-path transmission. Korus described a system where multicast calls are routed to recipients. Base sites 101-112 communicate with communication units which are arranged into talk groups using multiple RF channel pairs, as discussed in paragraph 14.

Korus discloses, therefore, bidirectional transmissions between users, which is in direct contrast with claims 1-16, wherein the communication from multicast controllers to recipients is unidirectional.

Similarly, Ginzboorg fails to cure the deficiencies in Thompson and Korus. As discussed in applicants' previous correspondence, there is no disclosure nor suggestion in Ginzboorg of transmitting control messages from a network multicast controller along at least one second multicast tree reserved for control messages to the at least one multicast controller at cell level, with the control messages comprising information on the multicast transmission of the internet protocol network, and a command configured to connect to the at least one first multicast tree of the internet protocol network configured for multicasts.

The Office Action of January 5, 2011, and the Advisory Action of July 21, 2011, take the position that the tree in Fig. 10(a) of Thompson is considered to correspond to the second multicast tree of claim 1. However, Thompson describes transmitting data from content source C.S.1 using the tree of 10a. Thus, it is not a tree reserved for control messages. In addition, the Office Action explains that the tree in FIG. 10(c) of Thompson is considered to correspond to the first multicast tree of claim 1. In Thompson, both trees terminate at the same point, at the receivers of the multicast transmission. This is mandatory in Thompson as in this reference the receivers must reply to a query to join a tree. Such is not the case in the present application. In the present claims, the tree reserved for control messages ends at the multicast controllers, not at the receivers

receiving the actual multicast data packets. Independent claim 1 recites, in part, “transmitting the control messages from the network multicast controller along the at least on second multicast tree reserved fro control messages to the at least one multicast controller at cell level...” The multicast controllers receive control messages and are able to connect to the first multicast tree on the basis of control information. As the tree reserved for control messages does not even reach the receivers, they are unable to respond to any control commands. This makes the comments presented in the ‘Response to Arguments’ section of the Office Action (lines 5 to 7) moot.

The Office Action and Advisory Action also take the position that Korus discloses edge devices at cell level and refers to base stations 101–112 of Figure 1. However, Korus does not disclose to separate multicast trees, one for data and one reserved for control messages. Korus discloses only one multicast tree. When a communication unit receiving a multicast transmission moves to the area on another base station, the base station is instructed to join the multicast tree so that it can transmit the multicast data to the communication unit ([0035]). Further, the base stations are configured to communicate with communication units which may be arranged into talk groups using multiple RF channel pairs ([0014]). Thus, Korus discloses bidirectional transmissions between users. This is in direct contrast with claim 1 where the connection from multicast controllers to a plurality of recipients is unidirectional.

Applicants respectfully but strongly submit that neither Thompson, Korus, nor Ginzboorg, when view either singly or when combined, discloses or suggests the

elements of the presently pending claims. The cited references cannot be interpreted as disclosing or suggesting transmitting multicast data packets in at least one first multicast tree from one transmitter through a plurality of multicast controllers to a plurality of recipients, where the multicast communication from a multicast controller to a recipient is unidirectional. Similarly, there can be no disclosure nor suggestion in the cited combination of references of generating at least one second multicast tree, reserved for control messages, in an internet protocol network beginning from a network multicast controller and ending to one or more multicast controllers at cell level.

It is further submitted that the other references of Kahn, Okanoue, Kumar, Gunter, and Dean also fail to cure the significant distinctions in the references of Thompson, Korus, and Ginzboorg. Furthermore, as noted in applicants' prior correspondence, Dean is not available as prior art to the present application. The present application is entitled to a priority filing date of September 7, 2001; Dean's effective filing date appears to be May 4, 2001, based upon the priority of provisional application no. 60/289,023. Even if Dean, therefore, is given the benefit of the provisional filing date, Dean is not available as prior art to the present application, since the present application is entitled to the filing date of Finnish Patent Application No. 20011778, filed on September 7, 2001.

The Advisory Action took the position that the claims, as previously submitted, did not adequately recite an elimination of reverse path transmissions, or that the second multicast tree is reserved for control/join messages. In view of these comments and other comments in the Advisory Action, the present claims have been amended to more

particularly point out and distinctly claim the subject matter of the invention, in particular with respect to the at least one second multicast tree being reserved for control messages in an internet protocol network beginning from a network multicast controller and ending to at least one or more multicast controllers.

In view of the above comments and explanations, it is respectfully requested that the present rejections be withdrawn. It is further submitted, however, that the use of three or four references, as attempted in the Office Action, is an improper piecemeal analysis, so as to extract a number of individual elements from each reference, with these elements being picked and chosen to recreate the claimed invention. There is no teaching or suggestion in the references or in the prior art in general to support their use in the particularly claimed combination. As stated above, it is improper to look to the applicants' own disclosure for any such motivation or incentive (*Interconnect Planning Corporation v. Feil*, 227 USPQ 543 (CAFC 1985), *Symbol Technologies Inc. v. Opticon, Inc.*, 19 USPQ 2d 1241 (CAFC 1991), *In re Rothermel and Waddell*, 125 USPQ 328 (CCPA 1960), *In re Jones*, 21 USPQ 2d 1941 (CAFC 1992)).

Furthermore, even if such a combination were to be made as proposed in the Office Action, there is no disclosure nor suggestion of the claimed invention. It is well established in United States patent law that it is error to ignore specific limitations of a claimed invention which distinguish over a cited reference or references. Applicants respectfully but strongly submit, therefore, that the invention as recited in claims 1-16

includes such specific limitations which are neither disclosed nor suggested in Thompson, Korus, Ginzboorg, and/or the other references.

In view of the above, applicants respectfully submit that each of claims 1-16 recite subject matter which is neither disclosed nor suggested in the cited prior art. Applicants submit that this subject matter is more than sufficient to render the claimed invention unobvious to a person of ordinary skill in the art. Applicants therefore request that claims 1-16 be found allowable, and this application passed to issue.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

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